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II. REMARKS/ARGUMENTS

The Office Action mailed March 24, 2005 has been received and reviewed. By way of summary, Claims 1-20 and 43-58 were previously pending in this application. In the present amendment, Applicants have canceled Claims 13-20 and 44-48 without prejudice or disclaimer. Claims 1-12 and 43 remain as previously presented. In response to the Examiner's request for restriction, Applicants have elected Claims 1-12 and 43 for prosecution on the merits without prejudice to canceled Claims 13-20 and 44-48. Applicants reserve the right to pursue any non-elected claims in one or more divisional or continuation applications. Applicants respectfully request the Examiner to reconsider the above-captioned application in view of the amendments set forth and the following arguments.

A. Discussion of Claim Rejections Under 35 U.S.C. § 112

The Office Action rejected Claims 1-12 and 43 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants respectfully disagree with the Examiner's rejection and respectfully traverses this rejection as set forth below.

1. Claim 1

As to Claim 1, the Examiner states that "it is unclear what the claimed 'a first program module' and 'a second program module' referred to [i.e., the instant specification discloses at least the following: 1) Block Allocation Manager Module, 2) Block Cache Module, 3) Local Block Manager Module, and 4) Remote Block Manager Module, which one is the first and second module?" In response, Applicants respectfully remind the Examiner that the specific embodiments described in the drawings and the specification of the above-referenced application are set forth to illustrate, and not to limit, the invention. One skilled in the art will recognize that the first program module and the second program module are clearly pointed out and distinctly claimed with respect to their respective programming configurations as set forth in Claim 1. While one or more of the modules described in the specification perform the claimed configurations, the first program module and the second program modules in Claim 1 are not limited to any specific embodiment.

The Examiner also asks "How to associate the claimed first, second modules with the respectively claimed functions? What are the links between the claimed first, second modules, file metadata, and error correction data? How can the claimed first programs

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dynamically select the claimed at least four storage modules for storing the claimed first error correction data or update the metadata on which the claimed first file portion, second file portion and the first error correction data are stored?”

Claim 1 recites, among other things, that the first program module and the second program module are “stored in said distributed file storage system and in communication with the set of storage modules.” Thus, Applicants respectfully submit that one skilled in the art would understand from Claim 1 how the first program module can dynamically select a first storage module on which to store the first file portion, a second storage module on which to store the second file portion, a third storage module on which to store at least a portion of the metadata and a fourth storage module on which to store the first error correction data. Further, one skilled in the art would recognize that the dynamic selection is based on at least one of performance, available capacity, and throughput of the set of storage modules. Further, one skilled in the art will recognize from Claim 1 that the second program module can dynamically update the metadata to indicate which of the set of storage modules on which the first file portion, the second file portion, and the first error correction data are stored. Thus, Claim 1 very clearly points out the associations of the first program module and the second program module with their respective functionality. Thus, Claim 1 is definite.

2. Claim 2

As to Claim 2, the Examiner states that “it is unclear what the claimed program module referred to?” Again, while one or more of the modules described in the specification perform the claimed configuration of the third program module, the third program module recited in Claim 2 is not limited to any specific embodiment. Rather, the third program module is clear and definite in Claim 2, which recites, among other things, that the third program module is “configured to instruct the set of storage modules to store the first file portion on the first storage module, the second file portion on the second storage module, the at least a portion of the metadata on the third storage module, and the first error correction data on the fourth storage module.” These limitations clearly define the scope of Claim 2.

The Examiner also states that Claim 2 is indistinct from Claim 1 because Claim 2 “is depend on claim 1 that discloses a dynamic selection and storing steps, however, the instant claim recited the use of the claimed third program module configured to instruct the set of storage modules to store....” However, Applicants respectfully disagree with the Examiner’s

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reading of Claims 1 and 2. Contrary to the Examiner's assertion, Claim 1 does not recite storing steps. Rather, Claim 1 recites that the first program module dynamically selects storage modules on which to store data and the second storage module dynamically updates the metadata. However, actual instructions for storing the data is provided by the third program module recited in Claim 2. Thus, Claims 1 and 2 are clearly distinct and definite.

3. Claim 4

The Examiner further states that "it is not understood what is meant by 'the metadata further indicates the location information' [i.e., what is the claimed location information for?]" Applicants respectfully submit that Claim 4 clearly states that the location information indicates "which of the set of storage units on which the parity data blocks are stored." One skilled in the art will recognize that in file storage systems, such as the distributed file storage system of Claim 1, the location of stored information is used to access or retrieve the information. One skilled in the art will thus recognize that, since the metadata indicates the location information, it can be used to locate and retrieve the parity data blocks. Thus, Claim 4 is definite to a person skilled in the art.

4. Claim 6

As to Claim 6, the Examiner states that "it is unclear what the association of the claimed 'a fifth storage module' and first storage module is [i.e., How the first program refers to the fifth storage module from the set of storage modules to store a copy of the first file portion in it?]" Applicants respectfully submit that Claim 6 is clear when read in light of its relation to Claim 1, from which it indirectly depends.

Claim 1 indicates that the first storage module is selected from the set of storage modules. Claim 6, as amended, also indicates that the fifth storage module is selected from the set of storage modules. Claim 1 indicates that the set of storage modules are in communication with each other and that the first program module is in communication with the set of storage modules. Thus, Claims 1 and 6 clearly indicate that the first storage module, the fifth storage module, and the first program module are in communication with each other. Therefore, an artisan will recognize from Claims 1 and 6 that such communication allows the first program module to "dynamically select from the set of storage modules a fifth storage module on which to store a copy of the first file portion in real-time," as recited, among other things in amended Claim 6. Further, Claim 6, as amended, clearly indicates that the first program module

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dynamically selects the fifth storage module from the set of storage modules such that “the fifth storage module is different from the first storage module and the third storage module.” Thus, Claim 6, as amended is clear and definite.

5. Claim 7

As to Claim 7, the Examiner asks “what is the link between the claimed ‘a third program module’ and ‘a third program module’ as recited in claim 3 [i.e., are they refer to the same module? Or different modules?]” Applicants respectfully submit that Claim 3 does not refer to a third program module. However, Claim 2 does refer to a third program module. Applicants respectfully remind the Examiner that Claim 7 does not depend from Claims 2 or 3. Rather, Claim 7 depends directly from Claim 1. Therefore, Claim 7 should not be read with respect to Claims 2 or 3.

As discussed above, while one or more of the modules described in the specification perform the claimed configuration of the third program module, the third program module recited in Claim 7 is not limited to any specific embodiment. Rather, the third program module is clear and definite in Claim 7, which recites, among other things, that the third program module is “configured to move the first file portion in real-time from the first storage module to a fifth storage module in the set of storage modules.” Thus, Claim 7 is definite.

6. Claims 3, 5, 6, 8-12 and 43

With respect to Claims 3, 5, 6, 8-12 and 43, the Examiner states that “these claims have the same defects as their base claim, hence are rejected for the same reason.” Applicants respectfully submit that Claims 3, 5, 6, 8-12 and 43 are each patentable at least for the same reasons articulated above with respect to Claim 1. Accordingly, Applicants respectfully request the Examiner to withdraw the rejection of Claims 1-12 and 43 under 35 U.S.C. § 112, second paragraph.

B. Discussion of Claim Rejections Under 35 U.S.C. § 102

The Office Action rejected Claims 1-2, 5-10 and 43 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,403,639, issued to Belsan et al. (“Belsan”). Applicants respectfully disagree with the Examiner’s rejections and respectfully traverse this rejection because Belsan fails to identically teach every element of Claims 1-2, 5-10 and 43. *See* M.P.E.P. § 2131 (stating that in order to anticipate a claim, a prior art reference must identically teach every element of the claim).

1. Claim 1

According to the Examiner, the data storage devices 11-1 – 11-N shown in FIG. 1 of Belsan are storage modules in communication with each other. However, Applicants respectfully disagree. FIG. 1 of Belsan does not show any communication between the data storage devices 11-1 – 11-N. Belsan teaches that an external data processor 2 can directly address the data storage devices 11-1 – 11-N (col. 4, lines 38-43). However, Belsan is silent as to direct communication between the data storage devices 1-1 – 1-N. Therefore, the data storage devices 11-1 – 11-N cannot be “a set of at least four storage modules in communication with each other,” as recited, among other things, by Claim 1.

The Examiner also states that step 2007, FIG. 20 and associated texts of Belsan teach dynamically selecting from the plurality of storage modules based on the available capacity. However, Applicants respectfully disagree. Belsan teaches a “snapshot copy” that creates “copies” of data by replicating pointers. Col. 2, lines 55-57. In FIG. 20, Belsan teaches steps to create a snapshot copy of an application data group. At step 2007, the file server system 1 determines whether sufficient resources are available to execute a received command to create a snapshot volume. Col. 34, lines 44-48. However, contrary to the Examiner’s assertion, Belsan does not teach making a selection from among a set of storage modules based on this determination of available resources. Rather Belsan merely teaches copying the pointers if sufficient resources are available or aborting the snapshot copy operation if sufficient resources are not available. Thus, Belsan is silent as to the subject matter of Claim 1 that recites, among other things, “wherein the dynamic selection is based on at least one of performance, available capacity, and throughput of the set of storage modules.”

Further, Belsan does not teach or suggest a first program module configured to “dynamically select from the set of storage modules a first storage module on which to store the first file portion,” and to “dynamically select from the set of storage modules a second storage module on which to store the second file portion, wherein the first storage module is different from the second storage module...wherein the dynamic selection is based on at least one of performance, available capacity, and throughput of the set of storage modules,” as recited, among other things, in Claim 1. Rather, Belsan is silent as to a basis for dynamically selecting the first storage module and the second storage module from among the set of storage modules.

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Belsan does not teach or suggest a first program module configured to “dynamically select from the set of storage modules a third storage module on which to store at least a portion of the metadata, wherein the third storage module is different from the first storage module and the second storage module,” as recited, among other things, in Claim 1. Belsan is silent as to selecting a third storage module for metadata that is different from the storage modules selected for the first file portion and the second file portion. Further, Belsan fails to teach or suggest that the dynamic selection of the third storage module on which to store at least a portion the metadata “is based on at least one of performance, available capacity, and throughput of the set of storage modules,” as recited, among other things, in Claim 1. Rather, Belsan is silent as to any basis for storing metadata on a particular storage module.

Belsan does not teach or suggest a first program module configured to “dynamically select from the set of storage modules a fourth storage module on which to store the first error correction data, wherein the fourth storage module is different from the first storage module and the second storage module; wherein the dynamic selection is based on at least one of performance, available capacity, and throughput of the set of storage modules,” as recited, among other things, in Claim 1. Rather, Belsan is silent as to the subject matter of Claim 1.

Thus, for at least the reasons discussed above, Applicants respectfully submit that Claim 1 is patentably distinguished over the cited reference. Applicants respectfully request the Examiner to withdraw the rejection of Claim 1 under 35 U.S.C. § 102(b) and to pass Claim 1 to allowance.

2. Claims 2, 5-10, and 43

Claims 2, 5-10, and 43 depend from amended Claim 1 and include all of the limitations of Claim 1. Applicants respectfully submit that Belsan fails to teach or suggest every element of Claims 2, 5-10, and 43. Thus, for at least the reasons discussed above with respect to Claim 1, Applicants respectfully submit that Claims 2, 5-10, and 43 are patentably distinguished over the cited reference. Applicants respectfully request the Examiner to withdraw the rejection of Claims 2, 5-10, and 43 under 35 U.S.C. § 102(b) and to pass Claims 2, 5-10, and 43 to allowance.

C. Discussion of Claim Rejections Under 35 U.S.C. § 103

The Office Action rejected Claims 3-4 under 35 U.S.C. § 103(a) as being unpatentable over Belsan in view of U.S. Patent No. 6,502,174, issued to Beardsley et al. (“Beardsley”). The

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Office Action also rejected Claims 11-12 under 35 U.S.C. § 103(a) as being unpatentable over Belsan and Beardsley, and further in view of U.S. Patent No. 5,884,098, issued to Mason, Jr. ("Mason").

Claims 3-4 and 11-12 are allowable, among other reasons, as depending, either directly or indirectly, from independent Claim 1, which is allowable for at least the reasons discussed above. Therefore, Applicants respectfully request the Examiner to withdraw the rejection of Claims 3-4 and 11-12 under 35 U.S.C. § 103(a) and to pass Claims 3-4 and 11-12 to allowance.

E. Conclusion

Applicants have endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims, the reasons therefore, and arguments in support of the patentability of the pending claims are presented above. In light of the above amendments and remarks, Applicants specifically request reconsideration and withdrawal of the outstanding objection and rejections. Applicants respectfully request the Examiner to withdraw the rejection(s) of Claims 1-12 and 43 and to pass Claims 1-12 and 43 to allowance. If the Examiner has any questions, Applicants invite the Examiner to call the undersigned directly.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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